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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,056	04/09/2004	Ming-Sheng Lai	12031-US-PA	3055
31561	7590	09/22/2004	EXAMINER	
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE			CHAN, EMILY Y	
7 FLOOR-1, NO. 100			ART UNIT	
ROOSEVELT ROAD, SECTION 2			PAPER NUMBER	
TAIPEI, 100			2829	
TAIWAN			DATE MAILED: 09/22/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,056

Applicant(s)

LAI ET AL.

Examiner

Emily Y Chan

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-13 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The disclosure is objected to because of the following informalities:

At (0014), line 1, "comprises" after "at least" should be deleted. In claim 15, "each of the shorting bars are " should be "each of the shorting bars is".

Appropriate correction is required.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim ('891) in view of Lee ('624).

Regarding to claim 1, Kim ('891) expressly discloses a testing apparatus, (see Fig. 2) for a flat-panel display as claimed, comprising at least a plurality of electrode lines (data lines 2) and a plurality of driving circuits (9,10) for driving the electrode lines (data lines 2), the driving circuits (10) being disposed on a first side of the flat-panel display, the testing apparatus comprising: a plurality of switching components (switching device 12), and at least a shorting bar (6) electrically coupled to the switching components (switching device 12).

Kim ('891) does not disclose that his switching components (switching device 12) are disposed on a second side of the flat-panel display opposite to the first side thereof.

Lee ('624) discloses a LCD panels (140) including test thin film transistors and exclusively teaches (see Fig. 5) that the LCD panels (140) comprises electrode or data line driver (143) being disposed on a first side of the flat-panel display (140) and the switching components (test thin film transistors 130) being disposed on a second side of the flat-panel display opposite to the first side thereof (see Col. 11, lines 5-10).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the teaching of having the data line driver on opposite side of the test thin film transistor as taught by Lee ('624) into Kim ('891)'s testing apparatus to produce the claimed invention that the switching components are disposed on the opposite side of the data driving circuit for the expected benefit of eliminating the step of cutting the gate lines and add/or data lines after a gross test as disclosed by Lee ('624) (see Col. 11, lines 15-17).

Regarding to claim 2, Kim ('891) discloses that his switching components (switching device 12) comprise a diode (see Fig. 7b).

Regarding to claims 3-4, Kim ('891)'s electrode lines (2) meet the claimed plurality of data lines and the plurality scan lines because it is well known in the LCD art that electrode lines can be either data lines or scan lines.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14 -18 are rejected under 35 U.S.C. 102 (b) as being anticipated by Kim ('891).

Regarding to claim 14, Kim ('891) discloses a testing apparatus (see Fig 2), for a flat-panel display as claimed comprising at least a plurality of electrode lines (2) and a plurality of driving circuits (9, 10) for driving the electrode lines (2), and the testing apparatus comprising: a plurality of switching components (12), electrically coupled to the electrode lines (2), and a shorting bar set (5,6), electrically coupled to the switching components (12).

Regarding to claim 15, Kim ('891) discloses that his shorting bar set comprises a plurality of shorting bars (5, 6); each of the shorting bars is electrically coupled to some of the switching components (12).

Regarding to claim 16, Kim ('891) discloses that each of his switching components (12) comprises a diode (see Figs 7A, 7B).

Regarding to claims 17 and 18, Kim ('891)'s electrode lines (2) inherently meet the claimed plurality of data lines and plurality scan lines because it is well known in the LCD art that electrode lines can be either data lines or scan lines.

Therefore, Kim ('891) anticipates the claimed invention.

Allowable Subject Matter

5. Claims 5-13 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 5-13 are indicated allowable because the prior art does not teach or suggest a testing apparatus for a flat-panel display with detail of all elements recited in the independent claims 5 and 10. Specifically the prior art does not teach a plurality of switching components, each of the switching components comprising a gate, a first source/drain, and a second source/drain, respectively, wherein the first source/drains are electrically coupled to the electrode lines, a switching set is electrically coupled to the gates of the switching components and a plurality of shorting bars, each of the short bars electrically coupled to the second source/drains or the switching components.

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Claims 6-9 and 11-13^{are} dependent on claims 5 and 10 respectively and indicated allowable accordingly.

6. The closest prior art does not teach the allowed features for the following reason:

Kim ('165) discloses a LCD panel for testing line on glass type signal lines and teaches at least two gate shorting bars and two data shorting bars. However, Kim ('165) fail to disclose the recited each of the switching components comprising a gate, a first source/drain, and a second source/drain, respectively, wherein the first source/drains are electrically coupled to the electrode lines, a switching set is electrically coupled to the gates of the switching components and a plurality of shorting bars, each of the short bars electrically coupled to the second source/drains or the switching components.

Kim et al ('074) disclose a thin film transistor substrate with testing circuit comprising plurality shorting bars. However, Kim et al ('074) fail to disclose the recited each of the switching components comprising a gate, a first source/drain, and a second source/drain, respectively, wherein the first source/drains are electrically coupled to the electrode lines, a switching set is electrically coupled to the gates of the switching components and a plurality of shorting bars, each of the short bars electrically coupled to the second source/drains or the switching components.

Kim et al ('975) disclose a liquid crystal display device comprising a gate shorting bar and data shorting bar. However, Kim et al ('074) fail to disclose the recited each of the switching components comprising a gate, a first source/drain, and a second source/drain, respectively, wherein the first source/drains are electrically coupled to the electrode lines, a switching set is electrically coupled to the gates of the switching

components and a plurality of shorting bars, each of the short bars electrically coupled to the second source/drains or the switching components.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Y Chan whose telephone number is 571-272-1956. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ec
9-14-04


**EVAN PERT
PRIMARY EXAMINER**